

BIOLOGICAL EVALUATION OF THE BELGIAN BEACHES BY MEANS OF TERRESTRIAL INVERTEBRATES

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Beaches belong to the least studied ecosystems, although they contain typical habitats for a large amount of specialised terrestrial invertebrates. This specific beach fauna was quite diverse along the Belgian coast at the beginning of the twentieth century. Especially species bound to organic matter, washed up on the tide line, were well represented. As a result of the development of mass tourism, most of our beaches are subject to mechanical beach cleaning and the suppletion of sand. These activities are believed to be responsible for the degradation of the original habitat. However, documentation on this topic was scarce and evidence of negative effects on local biodiversity was lacking. Therefore, the main goal of this research was to make an inventory of the terrestrial arthropod fauna on Flemish beaches and analysing temporal and spatial variation, in function of abiotic components such as the degree of recreation and the intensity of mechanical beach cleaning. The main conclusion is that a high degree of recreation and mechanical beach cleaning indeed has a negative influence on the richness of the species bound to organic detritus and also induces a change in community structure of terrestrial invertebrates along the Flemish coast. Secondly, predators and even parasites are also indirectly influenced by these anthropogenic disturbances, as a result of the declining prey population. Excluding or at least reducing these impacts along certain sections of the Flemish coast, might ensure the preservation of the organic detritus on the tide line and hence its associated beach fauna.

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